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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/422,347

Applicant(s)

OOMS ET AL.

Examiner

Dmitry Levitan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9 and 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The amendment, filed 09/23/04 has been entered. Claims 1-7, 9, 11-20 remain pending.

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

2. The disclosure is objected to because of the following informalities: cancelled claims are included in the specification (see page 3 for cancelled claim 10). Generally claims should not be incorporated in the specification because they often are renumbered or amended during the prosecution.

Appropriate correction is required.

3. A substitute specification is required pursuant to 37 CFR 1.125(a) because of numerous changes already incorporated in the specification.

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-6, 9, 11-13, 17, 19 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claim 1, detector that detects a common prefix in at least two different final destination addresses from a list of destination addresses, generator that generates a suffix list for final destination addresses and an adder that adds said suffix list to said common prefix list to create a compound destination address.

Regarding claim 9, an addressing device to address routing table memory via compound address having the same format as destination compound address.

Regarding claim 17, the generator and adder iteratively compressing the list of destination addresses.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-7, 9 and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Boivie (US 6,502,140).

8. Regarding claims 1 and 7, Boivie teaches a device and method for compressing a list of final destination addresses for a multicast message, wherein each final destination address in said list represents a different final destination host (source node A sends multicast transmission to destination nodes as shown on Fig. 1 and 3:2-10), comprising:

Detecting a common prefix in at least two different final destination addresses from said list of destination addresses (detecting R1R2 as common prefix for final addresses R1R2C and R1R2D in step 1 4:30-46),

Generating a suffix list for final destination addresses that are detected to have a common prefix, wherein said suffix list represents the non identical portions of said destination addresses detected to have a common prefix (combining last portions of the final destination addresses R1R2C and R1R2D into (C D) in step 2 4:50-55), and

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Adding said suffix list to said common prefix to create a compound destination address consisting of compressed final destination addresses (second part of step 2, producing a single element R1R2(CD) 4:55-58, third final destination R1B was dropped for clarity).

In addition regarding claim 1, Boivie teaches implementing the disclosed above method in a device (node unit 100 on Fig. 2 as a programmed computer apparatus 6:48-62).

9. Regarding claims 2, 3 and 4, Boivie teaches the destination address comprising IP addresses (the network is operated under IP 2:26-34) and other previously compressed compound destination addresses (previously compressed R1R2(CD) address on 4:55 is combined into a single element on 4:56-58).

10. Regarding claims 5 and 6, Boivie teaches the device incorporated into a host or a router of communication network with multicast capabilities (host computers or routers using the device on Fig. 1 and 2:51-61 with multicast capabilities 2:62-67).

11. Regarding claim 19, Boivie teaches a host generating multicast packets (host computer 2:51-67), and a router (routers 2:51-67) both comprising the devices operating as disclosed in claim 1 rejection above.

12. Regarding claim 20, Boivie teaches a router comprising a compression device with generating suffixes and adding them to prefixes as described above in the claim 1 rejection, implemented as a programmed computer apparatus.

13. Regarding claim 9, Boivie teaches a router comprising a routing table memory (inherently part of the system, because all routers comprise a routing table memory) and an addressing device to address the routing table memory via compound address having the same format as said compound destination address (inherently part of the system, because the router

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addressing device has to address the memory via compound address format, as shown in example 4:30-60, incorporated through the system).

14. Regarding claims 17 and 18, Boivie teaches iteratively compressing/generating suffix, prefix and adding them, for the list of final destinations (performing steps 1 and 2 for three destinations B, C and D on 4:34-60).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-13 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boivie.

Boivie substantially teaches all the limitations of claims 1 and 7.

Boivie does not teach detecting octet, nibble and bit aligned prefixes.

Official notice is taken that detecting octet, nibble and bit aligned prefixes is well known in the art to detect addresses with different lengths.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add detecting octet, nibble or bit aligned prefixes to the system of Boivie to improve the system operation with addresses with different lengths.

Response to Arguments

16. Applicant's arguments filed 09/23/04 have been fully considered but they are not persuasive.

On page 8 of the Response, Applicant argues that intermediate routing address being present within the compound address in the system of Boivie and absent in the compound address of the invented system.

Examiner respectfully disagrees.

Examiner believes that the exclusion of the intermediated routing addresses in the final routing addresses of the invented system was not directly claimed.

Boivie teaches a system operating with destination addresses B, C and D in his example on 4:36-60. Note that in this example nodes E-I are not discussed, as the final destination addresses are B, C and D.

Examiner believes that intermediate nodes routing addresses are present in some form in the final routing addresses of the disclosed invention, as portion A of the final addresses ABCD, ABCE and AFGH on Fig.1 of the disclosure is an intermediate address for node R1.

On page 8 of the Response, Applicant argues that phrase "compound destination address consisting of compressed final destination addresses" excludes Boivie system addresses R1R2C or R1R2D as containing intermediate addresses.

Examiner respectfully disagrees.

Boivie teaches R1R2 as a common prefix for the destination addresses R1R2C and R1R2D as the system address routing the packets through routers R1 and R2.

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Examiner believes that routing address of Boivie, R1 is equivalent of the address portion A of router R1 of the invention.

Applicant has submitted similar arguments found on pages 10-14. Examiner takes the same position on these arguments as disclosed above.

Applicant has attempted to challenge the examiner's taking of Official Notices on page 12; however Applicant has not provided adequate information or argument so that on its face it creates a reasonable doubt regarding justifying the Official Notice. Therefore, the presentation of references to substantiate the Official Notices is not deemed necessary. The examiner's taking of Official Notice has been maintained.

Examiner therefore believes that the cited references meet all the claims limitations and the rejection is proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL

Dmitry Levitan
Patent Examiner.
11/08/04



JOHN PEZZLO
PRIMARY EXAMINER